Art. XIV. *Exposition des Principes de la Nouvelle Doctrine Médicale, avec un précis des thèses soutenues sur ses différentes parties.* Par J. M. A. Goupil, Docteur en médecine de la Faculté de Paris, Demonstrateur à l'hôpital militaire de Toulouse, &c. &c. &c. 8vo. pp. 603, Paris, 1824.

Exposition of the Principles of the New Medical Doctrine. By J. M. A. Goupil, D. M. P. &c.

MEDICINE, one of the oldest and most important sciences to which the attention of man has ever been directed, is still enveloped in obscurity, still deficient in fixed principles, and subjected to the caprice of the ignorant and the prejudiced. When we reflect that this science has received the most devoted attention of some of the greatest men of almost every age, we are very naturally surprised at its present imperfect condition. But those who have examined the history of medicine, have ceased to wonder, that the greatest sum of genius and labour ever directed into one current, has failed to perfect a science, the almost unlimited extent, and extreme intricacy of which, are sufficient apologies for the unsettled state of many of its principles. We would by no means pretend that little has been done in medicine. The mass of facts collected is immense; the theories and hypotheses which have successively arisen and fallen are innumerable; and the number of well-established principles, though small in proportion, is still considerable.

Of all the systems of medicine yet proposed, that of BROUSSAIS is the only one strictly conformable to the Baconian principles, and therefore erected on an immoveable foundation. In reviewing the work before us, we shall adopt the analytical method, so successfully employed by some able reviewers, in the preceding numbers of this journal. In so doing, we shall, while we avoid all useless speculation and vain embellishment, condense, into the present paper, a greater number of the precepts of the illustrious reformer, and give a more connected view of his system, than could otherwise be done. All that we ask of our readers is, to examine the subject *fully* and *fairly*, even *experimentally;* this done, we leave the rest to reason.

The medical doctrines of Broussais are founded on observations made at the bed-side, and in the dissecting-room. They are in direct opposition to the empirical character of English medicine, over which they must finally triumph. The correctness of these principles depends on the accuracy of the observations from which they have been deduced, and the logical manner in which the deductions have been made; and their practical efficacy is the source of their present popularity and future stability.

The work of M. Goupil consists of a condensed view of the theses of several writers, very freely interspersed with his own observations. The first part of the volume embraces the subject of *irritation in general.* M. Goupil observes, that before the origin of the physiological doctrine, inflammation was the only form of irritation which had attracted attention; and that even that phenomenon was recognised in a few tissues only. He very justly ascribes to M. Broussais, the merit of accurately determining the symptoms of the various inflammations, and especially of those of a chronic kind. The thesis first quoted, is that of M. VIALLE, on irritation. This author states, that physiologists admit the existence of two fundamental properties; viz. sensibility and motility; to which they refer all vital phenomena. M. Broussais, (says Goupil,) denies the practicability of a distinction between sensibility and contractility; because the latter is, according to him, the only evidence of the former; and he makes contractility the principle, by the agency of which, all the vital phenomena are manifested. Yet Broussais believes, that the composition and decomposition of the tissues, are not the effects of the vital properties; but attributes them to a preëxisting "force vitale," and refers assimilation to the "chimie vivante," which, under the direction of the "force vitale," performs composition and decomposition. This is very abstruse; but we must allow, we think, a something existing before organization, and producing it; and also, that vital composition and decomposition are the results of chemical affinity, modified by a power which is very well expressed by the term "force vitale." M. Vialle observes, that the nerves and blood-vessels penetrate all the organs, and that by their condition we recognise health and disease. BROWN is correct in saying that life is preserved by stimuli. Some tissues possess more excitability than others: thus, the mucous membranes possess it in a greater degree than the skin, and this last in a greater degree than the cellular tissue; and as these tissues are not equally subjected to the influence of stimulants, it results, that one or more tissues may be irritated, or inflamed, while the rest of the system is in a state of debility. Ignorance of this fact was Brown's greatest error. Peculiarities of temperament depend on the excessive development of some tissue. Hence proceed predispositions to particular diseases. The action of stimulants produces that exaltation of the vital properties which constitutes *irritation;* and the abstraction of the usual stimuli generally produces the diminution of vital manifestation, which characterizes *debility.*

Irritation of an organ, and its consequent congestion, are effected by, 1st, the direct application of a stimulant. 2d. An impression sympathetically received from another organ already irritated. 3d. The absence of the usual stimuli. We have inflammation of the stomach from hunger. 4th. The diminution of action in some other organ. Exposure to cold, by checking the action of the skin, increases that of the lungs: hence, inflammation of the mucous surface, and even of the substance of the lungs. Living in damp rooms, with bad food and cold air, produces inflammation of the lymphatics, by diminishing the vitality of the heart and arteries. We therefore never have general excitement nor general debility; since the agents which excite one system of organs debilitate another, and vice versa. In fact, a very small blood-letting will sometimes increase a pulmonary inflammation, by debilitating the general system.

Irritation commences in the nerves, and is thence propagated to other parts. Where the irritation is confined to nerves, we have the diseases termed neuroses. But the irritation soon extends to the capillary vessels; the vessels become turgid, filled with red blood, hot, and painful. This is inflammation, a state of which irritation is the element. Under the influence of this irritation, the capillaries sometimes emit blood. This constitutes hæmorrhagic irritation, as seen in hæmoptysis, and in vomiting of blood from the irritation of an emetic. If the irritation be seated in the vessels which convey colourless fluids only, we have sub-inflammation, marked by swelling and accumulation of white fluids, without the presence of pain, heat, or redness; thence result scirrhus, tubercle, and other chronic degenerations.

The next subject is the local phenomena of irritations; and on this subject we quote the thesis of M. Duponchel. In internal inflammations, the situation of the organ often prevents us from perceiving the local lesion, and we must determine the nature of the case from the sympathetic derangements of other organs. In moderate gastritis there is often no pain of the stomach, while the head and limbs suffer considerably. Pain in the right shoulder is a common symptom of obscure hepatitis. Pain is therefore often absent in inflammation. Redness is always present during life. After death it is usually present, but sometimes is wanting. Acute peritonitis and croup are examples; both sometimes failing to present a trace of redness. M. Begin has found the mucous digestive membrane white, after rapid death from corrosive poisons.

M. Vialle observes, that inflammations do not tend to subside on particular days. He gives the usual description of the course and effects of inflammation. M. Goupil then considers chronic inflammation, by which is meant, not a long-continued disease, but one of slight intensity and slow progress. Acute inflammation may subside into a chronic state, the characters and treatment of which differ from the former in activity only. The occasional effects of chronic inflammation seated in very vascular tissues, are hepatization, (the red induration of M. Broussais,) in the lungs, callosity of the skin and cellular tissue, and thickening of the mucous membranes. The red induration sometimes changes into white induration.

Sub-inflammations are rarely primitive, being usually excited by a preëxisting red inflammation. Thus, gastro-enteritis sometimes excites irritation and swelling of the mesenteric ganglions, and this complication of gastro-enteritis with lymphatic sub-inflammation constitutes tabes mesenterica. Tubercles are developed in the lungs by inflammation of the bronchial mucous membrane, or even of the parenchyma or pleura. These sub-inflammations remain long after the subsidence of the original red inflammation. Chronic irritation in the white tissues indurates them, and finally softens them by complete disorganization. This, in the lungs, produces phthisis, and a sympathetic gastro-enteritis supervening, we have hectic fever. Sub-inflammation is not confined to the lymphatic ganglions, but exists in the white vessels of any part. Pathologists have erred in attributing diseases of the lymphatics to debility of that system. The apparent debility depends on the predominance of the lymphatic over the sanguineous system. The lymphatic diseases are irritations of that system, the undue development of which predisposes to disease. Scrofula is an example. When both the lymphatic and sanguineous systems are active, scrofulous inflammation progresses more rapidly. Lymphatic diseases have been supposed to be atonic, because they may proceed from debilitating causes, and are sometimes cured by tonics. But these causes, by debilitating the circulatory apparatus, have directed the vital energies upon the lymphatic system, which, under these circumstances, becomes more subject to irritations. Tonics sometimes cure this irritation by exciting the circulation, and thus effecting a revulsion.

M. Broussais considers sub-inflammation as the origin of fatty, steatomatous, and other analogous tumours. To the same cause must be referred the softening of bones, and the development of the chronic exanthemata, as tinea, &c. The most remarkable form of sub-inflammation is scirrhus. MM. Lemercier, Chanriont, and Marechal, have written theses on this subject. They have ascertained that all the causes of scirrhus, and its more advanced form of cancer, are easily traced to irritation. Such are falls, blows, violent pressure, or friction, the long-continued application of stimulants to points affected with common inflammations, by which these are rendered malignant. In this case the irritation is seated in the white vessels, constituting scirrhus; and when extended to the sanguineous vessels it brings on carcinomatous ulceration. Certain constitutions are predisposed to cancer as to other diseases. Cancer is a local disease, and does not depend, as was once imagined, on a virus in the blood. Being a disease of irritation, it should be treated on the same principles as other irritations. M. Maréchal gives a minute detail of thirteen cases of genuine cancer cured by local bleeding by means of leeches, a very low diet being also used. ? These cases deserve the particular consideration of the practitioner.

After giving, in a full and interesting dissertation, the facts and arguments from which the above observations are taken, our author proceeds to the consideration of *hæmorrhages and neuroses.* It has been observed that one effect of an irritation seated in the capillary vessels, is a disposition to pour out blood in considerable quantity. Hence, an important class of diseases, the successful treatment of which is peculiarly dependant on the correctness of the practitioner's theory. Physiological medicine has thrown much light on the theory of hæmorrhages, and has consequently, much improved the treatment of these diseases. Hæmorrhage was long supposed to proceed from a rupture of some large vessel of the diseased organ. Morgagni, and after him Bichat, ascertained that no rupture occurs, and that the blood is exhaled from the capillaries. The old humoral pathologists, visionary on all subjects, viewed it as the effect of a vitiated condition of the blood, which, becoming too fluid, escaped from the vessels. Brown unfortunately imagined all hæmorrhages to proceed from debility. Pinel, seeing symptoms of local irritation precede and accompany hæmorrhages, but sometimes overlooking these symptoms, supposed that it might proceed from either excess or deficiency of vital action. The latter opinion is now prevalent in England and in this country. It is, however, much opposed by the author of physiological medicine and his school in France; and hæmorrhage is supposed by them to proceed in all instances from irritation. On examining a part to which a sedative has been applied, or which has been accidentally debilitated, we do not find an unusual quantity of blood in it, but on the contrary it is pale, cool, less sensible than usual, and evidently in an inactive condition. Apply an irritant, and the part reddens, becomes hot and tender, and inflammation or hæmorrhage comes on. Debility, then, excludes blood from a tissue, while irritation invites it. However great then may be the debility of the muscular and cutaneous systems, there is always local irritation in hæmorrhage. Very intense irritations may arise in the most debilitated habits, and in such we often see blood discharged from the intestines in dysentery, from the lungs in catarrh, and from the kidneys in inflammation of those organs. Hæmorrhages too are best cured by powerful debilitants, as is seen daily. Astringents, it is true, are often efficacious, but they are also useful in inflammations which are moderate. Scorbutic and petechial hæmorrhages are offered as examples of atonic hæmorrhage. The same error exists here also. They are symptomatic of visceral irritation, and are best removed by such treatment as is calculated to relieve that state.

Broussais has greatly limited the number of the neuroses; since the term strictly signifies an increase or decrease of action in the nerves alone, and since nervous disease seldom, if ever, exists long without involving the blood-vessels.

We come now to the subject of the *sympathetic phenomena of irritations;* to which subject M. Goupil devotes the third chapter of his work. Much of this chapter is derived from the thesis of M. Moncamp, on sympathies. We will not detain the reader with the first part of the chapter, in which our author offers some objections to some of the views of M. Moncamp and others, on sympathy. The most important deductions from this part of the chapter are, that the nerves are the true media of sympathy, and that, although disease developes sympathies between organs, which do not appear in health to be associated, yet it is probable that the sympathies do exist in health, though less strongly than in a pathological condition. The sympathies are modified by many circumstances. Those organs which are important, as the stomach, heart and brain, throw the whole system into commotion, when diseased; while ligaments, the cellular tissue, and others produce much less disorder. The intensity of the irritation will obviously have great influence. The constitution of the individual also, has a great effect; the sympathies between organs being far less intimate in robust and lymphatic constitutions than in leeches near inflamed lymphatics, at the same time that we advise a dry, airy residence, a nutritious diet, and exercise, it is only for the purpose of debilitating the lymphatics, while we operate a revulsion upon the circulatory organs.

The fourth chapter of the work under consideration, is devoted to the examination of *intermittent irritations*, and most of the observations are taken from the thesis of M. Mongellaz. It will be recollected by physiologists that the functions of the organs are intermittent. The stomach does not always digest, the muscles are not always contracting, nor does the brain produce uninterrupted thought. The same occurs in disease. The number of periodical coryzas, phlegmons, eruptive diseases, hæmorrhages, neuralgias, and other irritations is very great. M. Broussais first demonstrated the pathological character of these irritations. Inflammation, in the form of fever, is the most common form of intermittent irritation. Many kinds of intermittent fever were formerly enumerated. The fever was hepatic, pleuritic, or dysenteric, according to the intensity of the symptoms shown by particular organs. When no organ offered very prominent symptoms, the disease was simple intermittent fever. When there existed an irritation without fever, it was called a masked fever. Such was the delusion of the ontologists; dividing a disease into numerous imaginary beings, and even creating fever where no febrile symptom existed. They have even gone so far as to deny, that intermittent fever depends on local inflammation. But what grounds have they for their opinion? None; they merely refuse to grant the possibility of an intermittent inflammation. The proofs of our assertion are irresistible. The symptoms of intermittent fever, are those of other inflammations. Its causes are the same as those of other inflammations. It sometimes produces external inflammations, by the revulsive agency of which it is cured. This is merely a transfer of the gastro-intestinal inflammation, as happens in other inflammations. The evidence of post mortem examinations, is an irresistible proof of the inflammatory nature of fever. The ontologists object, that intermittent fever is cured by tonics. The objection is idle; as the tonics are administered in the intermission, when there is no inflammation, and usually increase the disease, if used during the fever. Even when this last does not happen, we are not surprised, since we see ophthalmia, diarrhœa, and gonorrhœa, often cured by tonics. The intermittent nature of the healthy functions, tends to give a similar character to the same functions in a morbid state. The causes of irritations are often intermittent. Intermittent fever is most common in the spring and autumn; at which times the system is subjected to alternations of heat and cold; the days being warm and the nights chilly. Malaria, the most common cause of intermittent fever, exerts an intermittent influence. During the day the atmospheric poison is rarefied by the sun, and dispersed in the air, but at night it is precipitated in union with aqueous vapour, and the lower portions of the atmosphere are rendered noxious. Habit exerts an almost unlimited influence, both in health and disease, and an intermittent fever is sometimes kept up by it alone. These opinions on the intermittent character of the causes are due to M. Roche. Our author observes that some causes of intermittent fever do not generally appear to be intermittent. Even here, the intermittent nature of the healthy function affords a plausible explanation.

The fifth chapter of the work before us, is devoted to the consideration of the *treatment of irritations;* and here, particularly, we see the beautiful simplicity, and the practical utility of physiological medicine. Irritations are cured by debilitants, by revulsive irritants, and by stimulants applied to the irritated organ itself. Each of these plans deserve separate consideration. Debilitants are those means which abstract the principles of nutrition, or directly diminish the vital actions. Such are, abstinence from food, blood-letting, mucilaginous fluids, cold, and perfect repose. The thesis of M. Flahant furnishes valuable observations on general bleeding, the most powerful of the debilitants. When a vein is opened, the blood flows more rapidly into it, and is thus removed from the general mass of fluids, which becomes much less. The consequence is, that the brain, heart, and other organs, receiving less stimulation than usual, the vital actions of the irritated organ, as well as of the system in general, are diminished, and the irritation often removed. The effects of local depletion differ from those of general bleeding. The application of cups or leeches, produces, besides the loss of blood, a revulsive irritation, combined with congestion. If the flow of blood be free, the local irritation is in a great measure counteracted; while, if the depletion be slight, the irritation predominates. Hence, if we desire a moderate depletion with considerable revulsive irritation, we may apply cups; while, if we propose a more free depletion with less irritation, leeches are proper. Local depletion, when moderate, has little effect on the general system, emptying the capillaries and acting immediately on the surrounding parts. We must refer the effects of local bleeding to sympathy, since we cannot otherwise explain the rapid cure of gastritis or catarrh by the application of leeches over the epigastrium or sternum; no capillary communication existing between the viscera and the skin. In inflammations of the membranes, general depletion is much less efficacious than local bleeding. In inflammations of the mucous membranes especially, we seldom completely succeed by general depletion; on the contrary, we often diminish the mass of blood, and exhaust the patient without at all affecting the local irritation and congestion, which, being seated in the capillaries, is not easily affected by depleting the large vessels. In these cases, therefore, we must apply leeches to the skin nearest the inflamed organ. When, however, the inflamed organ is very vascular, as are the parenchymatous structures, and the circulation is violent, the benefit of local bleeding will be temporary, unless preceded by general depletion. This fact is important in acute hepatitis and pneumonia. In chronic inflammations local bleeding alone is proper, and is our most powerful agent. In external inflammations, local bleeding is very efficacious, and should be practised as near the diseased part as possible, unless the irritation be great; in which case the leeches or cups should be placed at a short distance from the inflamed point. When the strength of the patient is sufficient, we may repeat our local depletion as often as it is required; but, in the state of extreme prostration occurring in the advanced stages of some inflammations, as in typhus fever, even local bleeding may prove fatal. Here we resort to other sedatives and to revulsives. We must not mistake for debility that false weakness and oppressed pulse so common in the commencement of inflammations: bleeding here developes the pulse and strengthens the patient. When local irritation is great, our local depletion must be free; otherwise cups or leeches may be injurious. To aid the effects of general and local bleeding, we must restrict the patient to the most rigorous diet, apply cold, and if the viscera be inflamed, use mucilaginous drinks containing a little citric acid. Too free a diet counteracts our depletion. Nervous irritation demands the same treatment; the diseases called nervous being generally chronic inflammations. For these precepts on the use of local depletion we are indebted to our author and to M. Labauche, with whom we fully concur.

Our attention is next called to the *application of revulsives.* Revulsion is the diminution of one irritation by exciting another in a different part. The following rules are taken from the thesis of our author. We must never attempt a revulsion of an irritation which excites fever, as it is too powerful to be removed, and will be exasperated by the new irritation. To this we have seen a few exceptions besides those given below. Never then apply a blister to the chest in a pleurisy or peripneumonia so violent as to excite fever; such conduct being empirical and hazardous. Reduce the irritation by debilitants, until it cease to excite fever, and then apply revulsives to prevent it from becoming chronic. To the above rules there are some exceptions. In very violent inflammations of the brain and its meninges we must apply cold and leeches to the head, while the skin of the feet and legs is irritated by stimulants. In violent gastro-enterites, (ataxic and adynamic fevers,) when the important organs are congested, and there is too much prostration to admit of even local bleeding, we resort to revulsive irritants, applied to the skin. Revulsion is practicable in these cases, on account of the diminution of sensibility. Chronic inflammations are successfully treated by revulsives; but if they be great enough to excite sympathies in other organs, they must first be reduced by debilitants. Thus, in chronic pleurisy, we must not apply vesicatories to the chest, until a low diet, and local bleeding, have controlled the action of the heart, and the heat of the skin. When an inflammation is transferred from one organ to another, we restore it to the first organ, by applying to it irritants, at the same time that we apply local bleeding, and other debilitants, to the second organ. If, for instance, an ulcer dries up at the commencement of a fever, we cannot re-establish the ulcer, without, at the same time, applying leeches and cold to the epigastrium. What has been said of revulsives in acute irritations, may be affirmed of the same means, in moderate irritations having great extent. What advantage can we expect from blisters, in a moderate inflammation involving the greater part of the peritoneum? Revulsives are almost always injurious to very irritable patients, and must be removed as soon as their bad effects are perceived. Where, from idiosyncracy, any organ is unusually irritable, we sometimes irritate it, by attempting to produce a revulsion from another organ, or by accidentally exciting the latter. RICHERAND has seen a full meal produce empyema, by transferring the irritation of an ulcer to the pleura. It is dangerous to attempt a revulsion from one organ to another, which is very sensible, from the lungs to the stomach for instance. The artificial irritation should always be great enough to effect a revulsion, without going so far as to rekindle the original disease. A cutaneous eruption, therefore, or a phlegmon, appearing in a fever, must not be interrupted, unless it becomes too violent. In attempting a revulsion from any organ, apply the revulsive to a part, the excitement of which debilitates the former. A revulsion is thus effected from the lungs to the skin. Avoid the application of revulsives to a point, the stimulations of which, are reflected to the diseased organ. We avoid, therefore, the use of blisters in gastro-enteritis. One exception to this has been mentioned; and another is, that we may irritate the skin, when the gastro-enteritis is the result of a suppressed cutaneous eruption; using internal debilitants at the same time. Hæmorrhagic irritation of the digestive mucous membrane, may also be treated by vesicatories to the abdomen; the hæmorrhage assisting the revulsive. Here we cannot agree with the author unless the fever be but slight. When a chronic inflammation is seated in a very vascular organ, if our revulsives do not increase the disease, we must not relinquish them too soon, but persist for a longer time than is usual; by which means we will generally succeed. Revulsives are successfully opposed to nervous irritations and hæmorrhages, as well as to inflammations. An issue to the chest will often prevent consumption in persons disposed to that disease.

We come now to the consideration of the various *irritants*, the application of which, to the treatment of irritations, has been much restricted, by rational or physiological medicine. Irritants have been much abused by ontologists. Emetics are prescribed for fevers, expectorants for catarrh, and emmenagogues for amenorrhæa. Fortunately for patients, the revulsive agency of these medicines very often counteracts their local effects. Tonics and stimulants should never be applied to the treatment of inflammations, especially when seated in the stomach and intestines. They renew the irritation, and give it a chronic type. Hence, the dyspepsias, and the scirrhus alterations of the stomach and intestines.* Hence, the numerous cases of phthisis, brought on by expectorant balsams, used in the treatment of catarrh. The application of astringents, to the treatment of irritations of the kidneys, bladder, and urethra, as well as to the vagina, has given rise to innumerable cases of the most tormenting and incurable diseases; among which, is cancer of the os uteri. The irritants called antiscorbutics, should be banished from the treatment of scurvy; that disease consisting in a gastro-intestinal irritation, by which sanguification and nutrition are vitiated. Most of the diseases supposed to be nervous, and especially those of the stomach, are chronic inflammations; and in these, the antispasmodics are sometimes successful, but often injurious. Some of these diseases are, however, really nervous; and are often relieved by antispasmodics, provided the stomach be healthy. M. Goupil shows the fatal errors of the Italian contra-stimulant doctrine. He observes, that almost all their pretended contra-stimulants, are capable of exciting inflammation of the stomach. Of this, emetic tartar is an example. He observes, also, that these medicines, like other irritants, cure inflammation, by revulsive secretions; and not, as the Rasorians imagine, by a debilitating action. Narcotics, and especially opium, are active stimulants, and produce much cerebral congestion. They must be used with much caution in diseases of infants and old persons, because there is a great predisposition in such persons to cerebral irritation. They must never be opposed to sleeplessness caused by a local inflammation. They may, however, be used in purely nervous agrypnia; a rare disease. On account of their irritating properties, they must be avoided in all inflammations, both acute and chronic; their revulsive action often failing to occur. In chronic colitis, however, says M. Goupil, when there is neither pain nor fever, no tenesmus, and the evacuations moderate, and not bloody, opium is very useful. Besides this exception made by Goupil, M. Broussais observes, in his Histoire des Phlegmasies Chroniques, "l'opium nous reste encore: c'est toujours la meilleure ressource contre les irritations de la poitrine qui refusent de céder aux antiphlogistiques, et qui sont exaspérées par les irritans révulsifs."

---

* In admitting this rule, we would make allowance for extreme debility in some chronic cases, as in phthisis.

M. Goupil observes, that there are few diseases, in which the empirical use of emetics has not been common and injurious. Emetics are dangerous in plethoric habits, as they sometimes excite apoplexy. For the same reason, they must be cautiously used in very young, or old persons. Nervous irritability forbids their employment, on account of the risk of convulsions. Hepatic diseases should not be treated with emetics; since these medicines strongly excite the liver, and often increase irritation. In bilious fever, the liver is always much irritated, and demands sedatives. Emetics often cure gastric and hepatic diseases, by the revulsive evacuations which they excite; but they often fail to produce revulsion, and here they exasperate the disease; such cases occur daily. Emetics, given during the menstrual period, may produce amenorrhæa or menorrhagia; and during gestation, they may cause abortion. During the flow of the lochia, they are very dangerous, on account of the extreme irritability of the abdominal viscera at this period. In pleuritis, peritonitis, and in fact, in all inflammations, they are dangerous;* especially if the irritation be sufficiently intense to excite gastric sympathy. For the same reason, they should be banished from the treatment of hæmorrhagic irritations. In apoplexy, their danger is so great, that it were superfluous to say more, than that all physiological physicians avoid them. We are disposed to except cases evidently resulting from food recently taken. In palpitations of the heart, and in the pretended neuroses of the stomach, they are manifestly hazardous.

---

* This opinion seems to us to be carried too far.

Like emetics, purgatives have been very fatally employed by the humoralists. They should be used as seldom as possible during gestation, as they sometimes produce abortion; especially in women predisposed to this accident. During the lochial flow, they may produce metastasis to the mucous membrane. They are improper during lactation, as they communicate purgative qualities to the milk, and may even stop its flow, by metastasis to the mucous membrane. HIPPOCRATES very justly forbids them in acute diseases. In simple gastro-enteritis, they are, of course, improper. In eruptive fevers, also, they tend to suppress the cutaneous eruption, by concentrating the irritation upon the mucous membrane. They are generally injurious in acute inflammations of the kidneys, bladder, and urethra. In peritonitis, they are very dangerous, from the irritation which they excite in the mucous membrane and peritoneum. In the chronic form alone of this disease, are even laxatives admissible. In moderate hepatitis, they usually produce a temporary relief, by the revulsion effected upon the intestines; but the relief is momentary, and the permanent effect highly injurious. In rheumatism and gout they are improper; because they cannot act on the local irritation, and because they increase the gastric inflammation of which the articular disease is very often the effect. In hæmorrhagic irritations they are improper, as well as in nervous diseases and organic degenerations; from the general principle, that they tend to increase the irritation already existing. For these important cautions, with respect to the application of irritants to the treatment of irritations, we are indebted to M. GOUPIL and M. VALLEE. Our author next presents a very interesting analysis of the thesis of M. GERARD, on digitalis. M. Gérard ascertained, by experiments made on himself, that the alcoholic extract is the most active preparation of this vegetable. Also, that minute doses taken into the stomach, diminish nervous sensibility, and muscular vigour, and reduce the frequency of the heart's pulsations. That if repeatedly used, it inflames the stomach, and excites the action of the heart. That it is not a diuretic. That it should not be used in any case, when the stomach is diseased; but that it is very valuable in inflammations, when applied by friction. All these principles would be fully established, did our limits permit; its diuretic properties are, however, still asserted. The last section of the present chapter is occupied by a very excellent dissertation on convalescence; partly taken from the theses of MM. QUEMONT and RENNES. We regret that our limits prevent a full analysis of this section. The most important practical conclusions are, that we should never dismiss our patient during convalescence, since a chronic irritation is often mistaken for that state. That he should avoid all the causes which may produce the disease from which he is recovering. That he should never use a free diet, for the purpose of restoring strength; since, from the almost invariable tendency to relapse, that accident will be very apt to occur: his diet should be moderately nutritious, without being at all irritating. The whole tribe of tonics, emetics, and purgatives, should be shunned during convalescence; since they daily produce relapses, by irritating the convalescent organs, still very irritable, and perpetuate the diseases in those chronic forms, more to be dreaded than the acute inflammations.

We have attempted to give as full an exposition as circumstances would allow of the leading principles of the only philosophical system of medicine ever offered to the world. To the medical practitioner we recommend the application of these principles to the treatment of diseases. If strictly and judiciously pursued, they will never fail him in any case not beyond the reach of art. We proceed, without further comment, to the next part of the work before us.

The second part of our author's volume is devoted to the consideration of *gastro-enteritis*, or inflammation of the mucous membrane of the stomach and intestines. We pass over several pages, in which is contained a very interesting exposition of the numerous and important discoveries made by M. Broussais. It will suffice to observe, that until he devoted himself to the examination of the subject, little was known of the characters of gastro-enteritis and of chronic inflammation in general, and that the treatment of many diseases was consequently empirical. M. Goupil gives an analysis of the theses of MM. Moncamp and Foucault, on the sympathies of the gastro-intestinal mucous membrane. The sympathy between the stomach and brain is very intimate. A moderate stimulation of the stomach produces a lively flow of ideas, as after taking moderate quantities of wine, while indigestion is often accompanied with head-ache and other symptoms of cerebral disorder. Poisons taken into the stomach produce head-ache, vertigo and delirium. The connection of the eye with the stomach is known by the gastric origin of ophthalmia and amaurosis, both being often cured by means calculated to remove gastric irritation. Worms in the intestines produce dilatation of the pupil. Rega gives the case of a person, in whom any irritation of the tympanum caused vomiting. This is only an uncommon degree of an universal sympathy. Worms in the intestines produce itching of the nose, and a disgusting odour causes vomiting. The sympathies of the skin with the stomach are very numerous. Soon after eating, the skin contracts and becomes cooler, but in a short time it is warmer than before eating. All the eruptive fevers are cutaneous inflammations caused by gastro-enteritis, and the chronic cutaneous inflammations are usually kept up by gastric irritation. The locomotive apparatus is closely associated with the stomach, as is evinced by the strength conferred by tonics, and by the extreme weakness occurring in all intense gastric irritations. Inflammation of the joints, constituting gout and rheumatism, is often caused by gastritis, and cured by the application of leeches to the epigastrium. The pulsation of the heart is influenced by almost every impression made upon the stomach. The salivary glands, liver, kidneys, and lungs, sympathize with the stomach; gastritis deranging the secretions of the glands, and sometimes exciting what has been called a gastric cough. The genital organs are stimulated by a moderate excitement of the stomach, but acute gastritis produces an opposite effect. Pregnancy is announced by nausea, and metritis excites vomiting. The several parts of the digestive mucous membrane are intimately associated. Gastric irritation renders the tongue red or foul, and titillation of the uvula produces vomiting. The compression of the intestines, as in hernia, excites violent vomiting. We thus see that no organ can be considerably diseased without deranging the gastric functions.

The best of the theses offered on the *etiology of gastro-enteritis*, is that of M. Chauvin. He divides the causes into those acting immediately on the stomach, those which make their first impression on some other organ, and those which act both mediately and immediately. Among the former he classes all the highly-seasoned and stimulating articles of food, putrid fish, alcoholic and other stimulating liquids. Also tonics too freely used for the purpose of assisting digestion. Emetics, used frequently, or in that state of the stomach in which the tongue is foul and the secretions of the mouth bitter. Purgatives, often used, or used in large doses, especially in an irritable state of the stomach, are common causes of gastro-enteritis. Acrid metallic salts, and many vegetable poisons, belong to the first class of causes. Worms are usually considered as immediate causes of gastro-enteritis, but M. Chauvin is disposed to view them as more usually the effect rather than the cause of this state. He does not believe them capable of perforating the intestines, and supposes them to reach the peritoneal cavity through openings made by ulceration. Among the sympathetic causes, we find those which act upon the skin, as cold causing colitis, and heat inflaming the stomach and small intestines. Malaria, also, might have been included. Acute cutaneous inflammation is often repeated in the digestive organs. Inflammation of any organ sufficient to excite fever, always induces gastro-enteritis; hence there is no fever without this condition. The same may be said of wounds producing traumatic fever. The suppression of any evacuation is a very common cause of this disease. Violent physical exertion is a cause with which most persons are familiar. The passions, when highly excited, often give rise to gastric inflammation; in fact, they affect the stomach more than the heart. Anxiety always destroys the appetite, and finally produces fever. Gloomy ideas, from whatever cause they proceed, seldom fail ultimately to produce chronic gastro-enteritis, and unless cheerfulness be restored a cure is almost impossible. Intense and long-continued study often developes gastritis, and, the brain being excited, mania may follow. As mixed causes, M. Chauvin mentions the ingestion of cold water while the body is much heated, the action of miasmata, and irritation of the liver. We are willing to coïncide with M. Chauvin so far as respects the first and last of these causes, but we would in preference refer miasmata to the class of sympathetic causes, as we can find no evidence that they act immediately on any other than the cutaneous and pulmonary surfaces.

Our attention is next called to the *phenomena of acute gastro-enteritis;* by which term must be understood inflammation of the stomach and small intestines. It may commence suddenly or slowly. The patient complains of heat, and weight or compression of the stomach after meals, with lassitude and general uneasiness. The throat becomes hot and dry with thirst, and the complexion pale or yellowish. The mucous membranes of the nose, eye, or œsophagus sometimes inflame. The appetite is usually diminished, seldom increased. We have seen some cases in which intense hunger accompanied violent fever. Digestion is painful, with nausea, sour eructations, constipation, or sometimes diarrhœa. The disease often begins with gastric oppression. There is loss of appetite with fulness of the stomach; the mouth being clammy or bitter, the tongue thick and covered with a white or yellow coat. This state is usually removed by low diet. Emetics often relieve it, but are liable to develope intense fever. Gastro-enteritis often commences without these warning symptoms. There is vomiting of mucous or bilious matter, or else purging with colic and tenesmus. There is usually tenderness of the epigastrium; a very important symptom. This, however, is not always perceptible, for the gastric nerves being principally ganglionic, their sensibility is not easily developed. The skin of the epigastrium is often hotter than that of other parts. The sympathetic symptoms are important. Head-ache is almost always present, and the cerebral irritation is sometimes so intense as to excite delirium, with diminished sensibility, muttering, paralysis of the bladder, involuntary dejections, and other symptoms of the adynamic fever of the ontologists. The delirium may be violent, with convulsions, subsultus tendinum, picking at the bed clothes, and other symptoms of the ataxic fever of the ontologists. It would seem that in adynamic fever the irritation extends to the substance of the brain, while in ataxic fever the meninges and surface alone of the brain suffer. The heart is strongly irritated in the disease before us. In the commencement the pulse is sometimes, but not often, as fully developed as in parenchymatous inflammation. Its most common state is rapidity with smallness and concentration, sometimes intermittent, or almost insensible and convulsive. These last symptoms are very unfavourable. The pulse is sometimes little affected in the most intense gastritis, and this also is a bad symptom. The lungs receive the influence of the stomach, as announced by the rapid, laborious respiration, and the gastric cough and pulmonary inflammation may come on. The actions of the secreting organs are vitiated. The qualities of the bile are changed, and its quantity is increased, unless the hepatic irritation become intense. The urine is red, in small quantity, and excites pain when discharged. Towards the close of fatal cases the patient emits a peculiar odour, attributed by LALLEMAND to the absorption of urine. During the progress of the disease, the other mucous membranes redden, especially at their origins. The end of the urethra is red, as is also the mucous coat of the bladder. The conjunctiva is injected, the pituitary membrane dry, the mouth clammy at first, becomes hot and dry. The state of the tongue is an important index to that of the mucous membrane. In moderate gastritis it is usually large and whitish or yellowish, but as the irritation increases it reddens, in proportion to the acuteness of the disease. This redness of the edges and point of the tongue never exists without gastric inflammation, although acute inflammation may exist without extensive redness; and in this case we observe a number of red or violet spots projecting above the mucous coat. This last symptom is more common in chronic gastro-enteritis. The middle of the tongue is usually whitish or yellowish, but in some cases the whole surface is red. It is more narrow, in proportion to the intensity of the inflammation. When the disease is approaching a fatal termination, the tongue, lips, and teeth are covered with a dark, fuliginous coat, which dries and cracks. In lymphatic persons and infants, aphthæ often appear in the mouth. If the gastritis cease before the enteritis, we may have a premature appetite. Excessive thirst shows predominance of intestinal irritation. In gastro-enteritis the skin is hot, and uniformly dry, or covered with momentary perspiration. In the last stages the cutaneous irritation excites petechiæ, and the parts suffering pressure run into gangrene. In some instances an abscess appears in the region of the parotid, and may prove revulsive; or, if too acute, may increase the disease. In a few cases, the articular fibro-serous textures inflame sympathetically. The above symptoms, must, of course, vary with the constitution of the patient, the nature of the cause, and other circumstances. If the gastro-enteritis be considerable, from neglect, or the use of emetics, and the liver become implicated, we have bilious fever. Gastro-enteritis rapidly developed in a robust, sanguine subject, is principally displayed in the great activity of the circulation, and assumes the characters of inflammatory fever. The same inflammation occurring in lymphatic subjects, is principally exercised on the mucous cryptæ, and the gastro-intestinal mucus being abundantly secreted, we have mucous fever. When the nervous apparatus is excessively irritated, we have delirium, stupor, convulsive and putrid symptoms, in short, all the common symptoms of malignant fevers. We thus perceive that all fevers may be traced to gastro-enteritis associated with irritation of various organs. The epidemic and contagious fevers are gastro-enteritis, excited by vegetable or animal poisons dissolved in the atmosphere. M. Goupil gives, from the thesis of M. Gravier, an interesting account of an epidemic cholera occurring in India in 1817, and destroying more than six hundred thousand inhabitants. It is unnecessary to follow our author through the history of a disease so well known; but the treatment deserves some notice. M. Gravier attributes the extreme violence and extensive prevalence of this epidemic, to the fact that immense numbers of the inhabitants used, as a preventive, a camphorated and opiate solution, advised by the English practitioners. They were also treated with stimulants containing calomel, opium, camphor, &c. The fatality of this treatment was lamentable. Correctly referring the violent vomiting and purging, and the extreme muscular debility, to intense irritation of the mucous membrane, M. Gravier avoided internal medicine as dangerous, prescribed absolute diet, and bled the patient.[*] The effect was most happy. The patient whom he found almost speechless, was, in a few hours, comparatively free from danger. More than a

[*] We are not disposed entirely to reject morphine internally, or to a blistered surface; but we have had no experience with it in this disease.

second bleeding was seldom necessary. It is to be regretted that M. Gravier had not the means of local bleeding, the most important part of the treatment of this disease.

A knowledge of the *phenomena of chronic gastro-enteritis*, is not less important than that of the acute disease. The observations on this subject are taken from MM. Goupil, Poutier, Schacken, Archambault and Merot. Chronic gastro-enteritis is that state of the disease, in which the local and sympathetic symptoms are slight, and the digestion and other functions are not dangerously impeded. It may result from acute gastro-enteritis improperly treated, or from any of the causes of the acute disease. It is most apt to occur in persons of a bilious or nervous temperament, and in those devoted to literary pursuits, or subject to melancholy. The symptoms are so variable, that it is impossible to describe them in any determined order. The patient experiences at the epigastrium, a sense of uneasiness, or of pain, more or less acute, and extending to the hypochondria. There is often a sense of constriction, extending to the œsophagus, and even impeding respiration and deglutition. The epigastrium is sometimes tender, and at other times the chest is painful, and there is a slight cough. Loss of appetite, (anorexia,) is common, and the digestion is painful, with acid or acrid eructations, (pyrosis.) The disease augmenting, there is fullness of the stomach, thirst, confusion of ideas, with a sense of weight in the head, and aversion to exercise; the skin, especially of the hands, becomes hot, and the pulse is quickened. A full meal often excites vomiting. There is, usually, constant constipation, which, however, is sometimes interrupted by a temporary diarrhœa. In children, the inflammation often extends to the mesenteric ganglions; and we then have tabes mesenterica, *(carreau.)* The tongue is usually contracted, and red at its point and edges. The redness may be less intense, and more extensive, or there may be only small, red points projecting through the mucous coat. The middle of the tongue has frequently a whitish or yellowish coat, which is more perceptible in the morning. The breath is fetid, and the thirst considerable. In the slighter shades of the disease, the heart is not affected; but it finally becomes irritated, and a slight fever appears, which may become remittent or continued; and here there is danger of disorganization. The liver sometimes partakes of the irritation, and there is excess of bile, with a bitter taste, and a yellowish tinge of the countenance. The quantity of the urine is diminished, and its colour becomes reddish, or, in nervous persons, it is plentiful and limpid, as in hysteria. The brain is usually implicated, and the patient is sad, morose, suspicious, and all the characters of hypochondriasis are finally displayed. The skin is commonly hotter after meals; but if the inflammation be too slight to excite the sympathy of other organs, the skin is colder than in health. The strength of the patient is much diminished, and atrophy finally appears; the skin sinking between the muscles, and adhering to them. Such are the principal symptoms of a disease, which, from the excessive use of tonics, emetics, cathartics, and sudorifics, is but too common among us. This disease, however, sometimes assumes a character totally different from that above given, and the patient is tormented by that insatiable appetite, to which the name of boulimia has been given.

M. Goupil demonstrates the non-essentiality of several diseases, formerly misunderstood, and empirically treated. He points out the close resemblance between the above symptoms, and those of dyspepsia; shows that the causes of this disease are, all such as irritate the stomach; and that tonics, emetics, and other irritants, almost always aggravate the symptoms, after a momentary relief, while the treatment hereafter prescribed, always palliates or cures. True debility of the stomach, a rare disease, is shown by a large, pale tongue, no pain at the stomach, a feeble, but regular pulse, weakness, and total absence of all signs of irritation; and always yields rapidly to a wholesome diet, and mild tonics. Hypochondriasis, also, presents the symptoms of a chronic irritation of the digestive mucous membrane and of the brain; and to the treatment of this disease, we may apply the remarks made on dyspepsia. The results of gastro-enteritis, when the disease is treated with irritants, all tend to the destruction of life, by disorganization of the digestive apparatus. One of these results is scirrhus of some part of the stomach; announced by a pale yellow countenance, tumour, and lancinating pain at the epigastrium, and almost always, vomiting. When the disease is at the cardiac orifice, the pain is seated below the region of the heart, in the back, or the pharynx, and is increased on swallowing. When it occupies the body of the stomach, the patient is unable to take much food at one meal, and vomiting usually occurs soon after eating. If the disease occupy the pylorus, there is a hard tumour between the epigastrium and the right hypochondrium; and vomiting occurs two or three hours after eating, when the food is passing the pylorus. When the scirrhus runs into carcinomatous ulceration, the matter vomited is often bloody. It is well known to pathologists, that inflammation often destroys the cohesion of the tissues. It has been satisfactorily ascertained, that the perforation of the stomach, formerly attributed by HUNTER to the action of the gastric juice,* is the result of inflammation. M. Goupil quotes from the papers of MM. GERARD and LAISNE, several remarkable cases of gastritis terminating in death, from perforation of the stomach.

Under the name of *colitis*, M. Broussais describes the inflammation of the mucous membrane of the large intestine, constituting the diseases called diarrhœa and dysentery. This inflammation may proceed from all the causes of gastro-enteritis, and especially from unripe fruits, and other improper food, and from vegetable and animal matter, in a state of putrefaction. M. Goupil observes, that it is never contagious, unless allied to typhus; as in some epidemics. When the inflammation is slight, it assumes the form of diarrhœa. Diarrhœa is attended with wandering pains in the abdomen, especially near the umbilicus, and a sense of fullness in the pelvis, relieved by the subsequent evacuations. The colic is sometimes considerable, and is relieved by pressure, or external warmth. The evacuations are usually small, and of variable frequency; and consist of softened feces, mucous, bilious, or serous matter, of various colours. If diarrhœa be slight, the sympathies are not excited; but when more intense, there is thirst, anorexia, foulness and redness of the tongue, and lassitude. When the colitis is more intense, it assumes the form of dysentery. Here, the colic is acute, with small and frequent evacuations of mucous, bloody matter, or with ineffectual efforts to evacuate the feces. The disease progressing, the spasm of the bowels and the pain become intense; but the latter is little increased by pressure. The strength is exhausted as the disease increases. Under these circumstances, the stomach and upper intestine become inflamed; the mouth and tongue become dry and red; there is thirst, with soreness of the epigastrium, and in short, all the symptoms of gastro-enteritis, are added to those of colitis. Inflammatory dysentery is a gastro-entero-colitis, occurring in a sanguine subject. A combination of mucous fever and dysentery, constitutes mucous dysentery. If there be a predominance of bile, the disease is called bilious dysentery; and if the colitis be complicated with malignant fever, we have adynamic or ataxic dysentery. All these modifications have been divided, by the ontologists, into so many specific diseases. When colitis does not terminate in death or resolution, it passes into a chronic state. In this case, the colic ceases, and the stools become less frequent; and if the stomach be free from inflammation, there is, usually, a desire for substantial food; which, if granted, produces, a few hours afterwards, a painful colic, with increase of the symptoms. Chronic colitis, if not cured, is apt, eventually, to induce atrophy, with inflammation of some other organ, finally running into dropsy.

---

* We have seen the details of some cases, which we could not explain on any known principles.

The thesis of M. SCOUTETTEN, forms the fourth article of the present chapter. It presents a valuable exposition of the *pathological anatomy* of the *digestive mucous membrane;* and corroborates the pathological views of M. Broussais, by showing the evidences of inflammation, or even ulceration, left by fevers of all sorts, dyspepsia, boulimia, diarrhœa, dysentery, and a host of disorders, which, before the researches of M. Broussais, were misunderstood, and badly treated. As this very valuable paper does not contain any of the practical principles of the doctrine before us, we pass on to the next subject.

The next chapter contains an able defence of the *identity* of *gastro-enteritis* with the *essential fevers* of the ontologists. All the arguments against the positions assumed, are fairly combated, and the proofs adduced are so convincing, as to be, we think, irresistible, to every unbiassed mind. We had proposed to offer, at some length, the arguments of our author; but his paper is long, and almost incapable of further condensation. He proves that all the causes of fever are causes of gastro-enteritis. That the want of appetite, nausea, pain at the epigastrium, thirst, head-ache, heat and dryness of the skin, foulness and redness of the tongue, in short, that all the common symptoms of fever, are precisely those of gastro-enteritis. Also, that all the varieties of fever depend on the complication of gastro-enteritis with inflammation of some other organ, on the intensity of the disease, and on the temperament of the patient. We thus have bilious fever, when the liver is implicated, or ataxic and adynamic fevers, when the brain is intensely irritated.

We come now to the *treatment* of *gastro-enteritis* in its *acute form;* and in this, particularly, is the philosophical character of physiological medicine most evident. In inflammation of the stomach, as of other organs, M. Broussais avoids all irritants. He therefore forbids the use of emetics, cathartics, sudorifics, tonics, and all the perturbating means so much employed in fever. He allows that the disease is often cured by the revulsive irritations and evacuations, produced by these medicines, but observes that in many cases, they fail to produce revulsions, and rapidly destroy the patient, by their local effects, or give the disease a chronic, and almost incurable character. The means now to be detailed, being more efficacious, and unattended with risk, are preferable to the perturbating and hazardous practice.

When a patient presents the preliminary symptoms of fever, as loss of appetite, foulness of the tongue, bitterness of the mouth, &c. his diet must be reduced to the use of rice water, barley water, cooked fruits, &c. with cold water, or lemonade; and if he be robust, a dozen leeches may be applied to the epigastrium. This usually prevents the attack. When the fever has commenced, the number of leeches must be increased, according to the strength of the patient; and when they fall off, the bleeding may be continued by fomentations. In children, and weak persons, the leeches must be used cautiously, and the subsequent bleeding stopped. If the patient be very weak before the attack, even leeches may be avoided. They may also be avoided, if the disease be preceded by chronic gastro-enteritis. Should the disease continue, the leeches must be applied as often as is necessary. General bleeding is unnecessary, and sometimes even dangerous, unless the circulation be very violent, with great determination to the brain, lungs, liver, or some other large organ. No food must be allowed; and the drinks must consist of lemonade, solutions of gum arabic, or tragacanth, or some other mucilage, acidulated with citric or tartaric acid. Emollient fomentations may be applied to the abdomen with advantage. If the epigastrium be very hot, iced water may be applied; and if delirium come on, the same may be applied to the head. When the patient is convalescent, we gradually increase the quantity of food; beginning with preparations of sago, rice, and barley. In most cases of fever, vesicatories and sinapisms are apt to do harm, and must be avoided. Where, however, intense cerebral irritation appears, with low delirium, stupor, or other cerebral symptoms, we first apply leeches to the temples, and ice to the head; and if these alone fail, we may add sinapisms, and even vesicatories, to the legs. Blankets soaked in hot water, and applied to the legs, are also valuable. Another case in which revulsives may be used in fever is, where a hæmorrhage occurs. The hæmorrhage, if there be little debility, and it be moderate, need not be interrupted; but if the patient be weak, or the bleeding great, we apply blisters or sinapisms, and not astringents; hæmoptysis demands a vesicatory to the sternum, and epistaxis to the back of the neck. Inflammation of the lungs, liver, or any other organ, occurring in fever, will demand local or even general bleeding. Should the gastro-enteritis become so violent as to assume the form of typhus, and the prostration become so extreme as to forbid the use of leeches, we then resort to acidulated mucilages internally, and apply fomentations and poultices to the abdomen, with sinapisms to the feet and legs. Four or five leeches may be applied to the epigastrium, and the bleeding stopped, if the pulse sink, but not so if it rises. The bowels must be kept open, during the whole course of the disease, not by purgatives, but by mucilaginous enemata.* Such is an outline of the physiological practice.

The *treatment* of *chronic gastro-enteritis*, (dyspepsia, boulimia, &c.) is very simple. If the patient be robust, confine him for a few days to absolute diet, and apply a dozen leeches to the epigastrium. After this, the treatment will consist in abstinence from all animal food, and the use of sago, rice water, barley water, small portions of very light bread, &c. This diet must never be violated. The occasional use of leeches, and the frequent use of poultices, will be required. The bowels must be kept open by enemata; never by laxatives. We do not fully adopt this generally correct precept. Moderate exercise will be useful: as also will the cold bath in summer, when the strength of the patient will bear it. The treatment must be pursued for months, if necessary.

The *treatment* of *acute colitis* will be very similar to that given for gastro-enteritis. Diarrhœa and dysentery, the common forms of colitis, demand the same low diet as gastro-enteritis. In addition to this, we apply leeches to any painful part of the abdomen, and to the anus. Cold, mucilaginous drinks, and poultices to the abdomen, will also be very useful. Internal medicines are generally improper; but when there is no longer fever, nor tenesmus, and no blood is discharged, gentle opiates are proper, and may be placed in the rectum, if the stomach be irritable. The treatment of chronic colitis differs from that of the acute disease, in little but activity. Here, however, the diet will sometimes require some addition, to support the strength. If the disease be slight, and the stomach healthy, a gentle tonic will assist digestion; but its effect must be closely observed. Mucilaginous and slightly narcotic enemata will be useful; and if there be no fever, tenesmus, nor frequent discharges, opium internally will be beneficial.

In the *treatment* of *intermittent fever*, the principles already given must be applied. In the cold stage, avoid stimulants, and allow tepid drinks only. In the hot fit, follow precisely the plan above directed. This will often cure the disease; if not, resort to the sulphate of quinine. The quinine must not be used in the first intermission, nor in any subsequent period, while the tongue is red, the skin dry, or hot, or if there be thirst, soreness of the stomach, or any other febrile symptom. When, by a proper antiphlogistic treatment, we obtain a perfect apyrexia, shown by a regular pulse, little thirst, no heat of the skin, nor tenderness of the stomach, and a tongue sufficiently pale in its whole extent, the quinine will be safe and efficacious.

---

* In a few cases, even after local bleeding, enemata do not act sufficiently; here, we are accustomed, if the gastritis be not very acute, to use the mildest laxatives.

Common remittent fever requires the treatment proposed for gastro-enteritis; but some modification is required in *malignant intermittents* and *remittents.* When the disease is very malignant, and the patient is in great danger, we cannot depend on antiphlogistics alone, but must resort to the sulphate of quinine in the remission. If the stomach reject it, throw it into the rectum,* and rub the skin with the tincture of bark. Local bleeding, and other antiphlogistics, also, must be used, if the patient be sufficiently strong. If there have been several paroxysms, and the pulse be small, feeble, intermittent, the skin livid, and the patient senseless, avoid even local bleeding; apply to the legs and thighs the most rapid rubefacients, while a solution of several grains of sulphate of quinine is thrown into the rectum, and the skin is rubbed with the tincture of bark. The bark and quinine are dangerous in these cases, but without them the danger is greater.

M. Goupil goes on to the consideration of the *relations* of *gastro-enteritis* with *other inflammations.* In some preliminary remarks he observes, that the principles of the new doctrine are applicable to surgery. Traumatic fever is to be treated on the usual principles, and local inflammation from wounds must be relieved, if excessive, by local bleeding.

In treating of *hepatitis,* our author demonstrates that it is always caused by, or associated with, gastro-enteritis. All the causes of hepatitis act at the same time on the mucous membrane.† Such are improper food, tonics, emetics, external heat, &c. Acute hepatitis is preceded and accompanied by the usual symptoms of fever; and the chronic form is always combined with dyspepsia, hypochondriasis, or other symptoms of chronic gastro-enteritis. The treatment of acute and chronic hepatitis differs very little from that of the corres-

* Apply also several grains in powder to blistered surfaces.

† Excepting wounds of course.

ponding forms of gastro-enteritis. The same regimen, local bleeding, and other means, must be used. Leeches to the right hypochondrium, also, are proper; and if the disease be acute, general bleeding will be required. The treatment must be pursued, until there remains neither fever, dyspepsia, pain of the liver or right shoulder, nor any other symptom of the hepatic disease.

In the next article he shows that the *exanthemata* are gastro-enterites associated with cutaneous inflammation. They commence with all the usual symptoms of gastro-enteritis, (fever,) which have been repeatedly enumerated. After a few days an eruption appears; which, if of proper intensity, is completely revulsive, and stops the fever. If the eruption be not sufficiently abundant, the cutaneous inflammation and fever co-exist. If the cutaneous inflammation become too intense, it is repeated in the mucous membrane, and the fever is increased. This last is the secondary fever of authors. Eruptive fevers require precisely the same treatment as simple fevers, until the appearance of the eruption. Here, also, the same treatment is proper, unless the cutaneous inflammation become intense; in which case we may apply emollient fomentations, and place leeches near the most highly inflamed points; especially on the face. This is particularly useful in confluent small-pox. If rosalia become complicated with angina, or measles, as is usual, with catarrh, leeches may be applied to the neck, and under the clavicles.

Gastro-enteritis is often associated with *articular inflammation*, in the forms of gout and rheumatism. When the disease commences in a small joint, it is called gout; when it commences in a large joint, or in several small articulations, it is called rheumatism. There is no essential difference between these diseases. They may be confined entirely to the joint; but more usually they are associated with acute or chronic gastritis, or gastro-enteritis. The causes of gout are cold, metastasis of some irritation, improper food, especially the luxuries of the wealthy, the abuse of tonics, and all the other causes of gastro-enteritis. It is usually preceded by the symptoms of chronic gastritis, and it is well known, that any error of diet always aggravates it. The treatment of gout and rheumatism is very simple. If the disease appear to be entirely local, the patient is to be confined to a strict diet, and leeches applied freely to the joint, while the bowels are opened by enemata. If considerable fever arise, and the patient be strong, general bleeding may become necessary, with leeches to the epigastrium. In general, there will be symptoms of gastritis, either acute, or in the chronic or dyspeptic form. This will demand leeches to the joint and the epigastrium, with a low, mucilaginous diet, and other treatment already mentioned as proper for gastro-enteritis. All internal medicines must, for an obvious reason, be avoided. These few facts and principles are taken from the valuable and extensive observations of our author, who is in some degree indebted to M. Roche.

Our author has compiled, from the works of Broussais, Lallemand, and Richond, some rational precepts on the subject of cerebral irritation, and its connexion with gastro-enteritis. It is universally acknowledged, that the principal phenomena of apoplexy, mania, epilepsy, tetanus, catalepsy, and some other diseases, depend on nervous disorders. M. Broussais has ascertained that all the alterations of cerebral structure, as well as serous and bloody effusions into or upon the brain, are effects of inflammation. We have already mentioned, that the delirium, stupor, subsultus tendinum, and other ataxic symptoms of violent fever, depend on acute irritation of the brain, excited by the intensity of the gastro-enteritis. In the violent gastro-enteritis produced by poisons, there is a series of nervous symptoms; such as delirium, vertigo, trembling, paralysis, &c. Opium, when swallowed in a large dose, produces a state resembling apoplexy. M. Lallemand has seen cephalitis produced, in the treatment of paralysis, by the internal use of the nux vomica, emetics, purgatives, and various other irritants. The premature use of the sulphate of quinine, in the treatment of fever, has produced paralysis. Extreme intoxication closely resembles apoplexy. This state does not proceed from the absorption of the alcohol; for it is removed by vomiting, and by dilute ammonia. Some wines, also, which contain little alcohol, produce intoxication more easily than some others containing more of the active principle. The same may be said of the mixture of wines. The diseases of the nervous system, as palsy, apoplexy, and others, are generally associated with symptoms of gastric disorder; and an error in diet often suddenly produces these diseases. The chronic diseases of the brain, as mania, (especially when periodical,) and idiotism, are almost always preceded and accompanied by symptoms of gastric irritation. From all these facts, as well as from others too numerous for present notice, our author justly concludes, that mania, hypochondriasis, &c. as well as most other cerebral diseases, are usually excited and kept up by gastro-intestinal irritation, in the same way as gout, hepatitis, &c. It is almost superfluous to say, that practice must be modified by the knowledge of these facts; and that internal irritants must be cautiously used in apoplexy and analogous diseases.

The last subject considered by M. Goupil is *asthenia* or *debility*.

M. Broussais has shown, that the number of diseases depending on debility is very small. Debility of an organ may proceed from the abstraction of its usual stimuli, or from an increase of action in another organ. The stomach is thus debilitated, by being deprived of all food, except insipid, mucilaginous liquids. The use of a blister, as a revulsive, is an example of the second mode in which debility is produced. Debility from abstraction of stimulus, is usually followed by reäction. Hunger ends, if not gratified, in gastritis; and a part to which cold has been applied, becomes irritated on the removal of the cold; unless the latter be extreme, or long-continued. Debility is sometimes a consequence of excitement; as in exhaustion from violent exercise, and real debility of the stomach, subsequent to gastritis. Excessive increase of the organic actions of any part, may debilitate its function; as we see in the diminished contractility of an inflamed muscle. Debility produced by abstraction of stimulus, must be removed by the cautious application of gentle stimuli. Debility of the stomach must be treated with easily digestible food, and gentle tonics; active stimulants will create gastritis. Debility of an organ from irritation of another, will demand the removal of the irritation. Muscular debility from gastro-enteritis, as in typhus fever, must be relieved by debilitants applied to the mucous membrane; and not by internal stimulants, which will exasperate the cause of the debility.

In concluding our observations on the present work, it would be ungrateful to neglect the author, but unnecessary to detain the reader with recommendations of a performance, the value of which is self-evident. M. Goupil has conducted his exposition in a manner scarcely susceptible of improvement; and strong indeed must be that scepticism, which can resist the appeal of conclusions logically drawn from undeniable premises.*

Both the doctrines and the practice, a faint sketch of which we have given, once appeared to us, as trivial as they can seem to any of our readers. But a full investigation has long since convinced us, that the doctrines contain fewer errors than those of any other system, while the practice, if any difference be allowed between rash violence and scientific prudence, is the most active ever pursued. Of this we have daily proofs. The idea, very prevalent among many who have not seen patients treated on the preceding principles, that it is too mild for acute diseases, is entirely erroneous; indeed, it is to these very cases that it is applied with the most rapid and beneficial effect. A friend once observed to us, that under the physiological treatment, common intermittent fevers would continue six weeks. Yet we have since known that physician to treat such cases with perfect success, in almost precisely the manner which he formerly considered as entirely inert; and this, too, under circumstances by no means propitious to the physiological system; as he had not the means of local bleeding, "the very head and front" of the physiological treatment of gastro-enteritis. Let others follow the liberal example here set before them, deciding the question by a full and fair trial.

---

* We announce with pleasure, that Dr. J. C. Nott, of Columbia, S. C. has prepared, and will publish as soon as practicable, a translation of this valuable work.

It is much to be regretted, that throughout our country, the system of Broussais is constantly denounced by practitioners who have neither tried it themselves, nor seen it tried by others; nay, by many who are totally ignorant of its details. To such, we would apply an observation of an English writer on another subject, "we have laughed at it long enough; it is now time to learn it."

To such as have studied the works of Broussais and his pupils, the former is known as a philosopher of the most brilliant talents, improved by vast experience, and possessing a degree of tact inferior, perhaps, to that of no one of his cotemporaries. His name and his opinions should be respected, as those of a veteran philanthropist, who has, through a long series of years, laboured hard and incessantly for the benefit of mankind; and if there be still many who denounce him without reason, let them

> "Pray to the gods to intermit the plague
> That needs must light on this ingratitude."

It is still a pleasing reflection, that the cause which we have so weakly but earnestly pleaded, is gaining ground rapidly, and must inevitably prevail; while the declining years of Broussais will be made happy, by the certainty, that in the end, few benefactors of the human race will receive a greater tribute of gratitude than the author of *Physiological Medicine.* E. D. Faust.